

## Controlling Brown Patch on Warm-Season Turfgrasses in Home Lawns

Brown patch is the most damaging disease of warmseason turfgrasses in Alabama. St. Augustinegrass, zoysiagrass, and centipedegrass are most susceptible to this disease; common and hybrid bermudagrasses are rarely damaged.

Excessive nitrogen fertility levels and thatch often lead to outbreaks of brown patch. The disease usually develops on lawns during periods of wet, overcast weather in late spring or fall. Damage is often heaviest after several days of showers with day temperatures of 60° to 80°F and heavy cloud cover.

In humid coastal areas, brown patch is usually found from late fall through early spring on St. Augustinegrass and centipedegrass lawns during extended periods of mild, cloudy, wet weather.

### Symptoms

Brown patch first appears in lawns as small, circular, brown areas several inches in diameter, which quickly increases to 3 to 6 feet (Figure 1). These areas often grow together, forming irregular patches of brown, blighted turf up to 20 feet in diameter (Figure 2).

The foliage of high-cut St. Augustinegrass or centipedegrass turf often wilts and collapses, giving the blighted patches a sunken appearance. Damaged turf usually recovers when conditions no longer favor the spread of disease. Regrowth of the turf may start in the center of the blighted area, forming a ring or frog-eye pattern. Weeds frequently invade turf damaged by brown patch.

Damage to individual grass plants is usually confined to the foliage. Leaves and leaf sheaths attacked by the brown patch fungus, *Rhizoctonia solani*, first become water-soaked, then wilt, and finally turn brown. On broadleafed turfgrasses like St. Augustinegrass, distinct tan-colored leaf spots surrounded by a water-soaked margin are sometimes seen. If the crowns of individual plants or stolons are invaded, large areas of a lawn may be killed.

### Control Measures

Nitrogen fertility has a significant impact on brown patch development. High nitrogen levels promote the growth of soft, succulent leaves that are susceptible to attack by the brown patch fungus.

To help prevent disease outbreaks, apply a low rate of a nitrogen fertilizer at 4- to 8-week intervals through the growing season, or use a slow-release nitrogen source to maintain an even growth rate.



**Figure 1.** Brown patch on zoysiagrass (top) and St. Augustinegrass (bottom)



**Figure 2.** Under favorable conditions, damaged areas grow together to form large, irregular patches of blighted turf.

To reduce the risk of disease outbreaks during the winter and early spring, avoid fall and late winter applications of high rates of nitrogen fertilizer. Finally, maintain phosphorus and potash fertility levels according to soil test recommendations.

Moisture also plays an important role in disease development. Good drainage is needed to remove excess water from low-lying areas. To speed evaporation of water from the foliage, prune nearby trees and shrubs to reduce shade and improve air movement and sunlight penetration. Also, irrigate lawns at midday to minimize the time that the foliage remains wet.

Thatch harbors the brown patch fungus. Periodic mechanical dethatching or core aeration is needed to prevent thatch buildup, especially on high-maintenance St. Augustinegrass and zoysiagrass lawns.

Outbreaks of brown patch are usually too sporadic, especially on home lawns, to justify a preventive fungicide spray program. Limit preventive treatments to portions of those lawns that have previously been damaged by this disease.

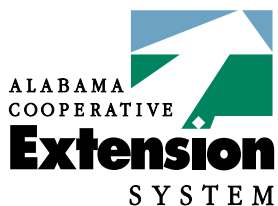
Make applications only when weather conditions favor the spread of disease. The time interval between applications varies between 10 and 21 days, depending on the fungicide used.

On most home lawns, a fungicide spray program should begin as soon as symptoms appear and continue until the turf starts to recover or until weather conditions no longer favor the spread of disease. For best results, apply fungicides at 5- to 7-day intervals to the diseased area and to a 1- to 2-foot border.

See Table 1 for a list of fungicides recommended for brown patch control on warm-season turfgrasses on home lawns. A complete listing of fungicides can be found in Extension publication ANR-530, "Disease and Insect Control for Commercial Turf."

**Table 1.** Fungicides Registered for Brown Patch Control

Product	Amount To Use Per 1,000 Sq. Ft.	Comments
fenarimal Rubigan AS	1.5 fl. oz.	Apply at 7- to 14-day intervals in 2 to 5 gal. of water per 1,000 sq. ft. Shorten intervals and tank-mix with Daconil 2787 or Fore when disease is severe.
iprodione Chipco 26019 50W	1.5 to 2 oz. (9 to 13 T.)	Apply at 14- to 28-day intervals in 2 to 10 gal. of water per 1,000 sq. ft. Under severe conditions, shorten spray intervals and increase rates.
mancozeb Protect T/O Fore 80W	4 oz. 4 oz.	Apply at 7-day intervals in 3 to 5 gal. of water per 1,000 sq. ft.
propiconazole Banner MAXX	2 to 4 fl. oz.	Apply in 2 to 5 gal. of water per 1,000 sq. ft. before symptoms are seen. Repeat at 14- to 28-day intervals. <b>DO NOT</b> apply more than 4 fl. oz. per 1,000 sq. ft. in a 30-day period to bermudagrass. If needed, retreat every 10 days.
Immunox	20 fl. oz.	
thiophanate-methyl Cleary's 3336WP Cleary's 3336F Fungo FLO Fungo 50	2.0 oz. (4 to 8 T.) 1 to 2 fl. oz. 1 to 2 fl. oz. 2.0 oz.	Apply when disease symptoms first appear, and continue at 5- to 14-day intervals as needed. Shorten spray interval and increase rate when disease is severe.
triadimefon Bayleton T/O	1 to 2 oz. (6 to 12 T.)	Apply at 15- to 30-day intervals in 2 to 4 gal. of water per 1,000 sq. ft. when weather patterns favor disease development. Shorten interval and increase rate when disease symptoms appear.



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Use pesticides **only** according to the directions on the label. Follow all directions, precautions, and restrictions that are listed. Do not use pesticides on plants that are not listed on the label.

The pesticide rates in this publication are recommended **only** if they are registered with the Environmental Protection Agency and the Alabama Department of Agriculture and Industries. If a registration is changed or cancelled, the rate listed here is no longer recommended. Before you apply any pesticide, check with your county Extension agent for the latest information.

Trade names are used **only** to give specific information. The Alabama Cooperative Extension System does not endorse or guarantee any product and does not recommend one product instead of another that might be similar.

**For more information**, call your county Extension office. Look in your telephone directory under your county's name to find the number.

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